



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,256	02/20/2002	Kenneth K. Li	2138-239	3227

6449            7590            05/15/2003

ROTHWELL, FIGG, ERNST & MANBECK, P.C.  
1425 K STREET, N.W.  
SUITE 800  
WASHINGTON, DC 20005

[REDACTED] EXAMINER

PAYNE, SHARON E

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/078,256	LI, KENNETH K.	
	Examiner Sharon E. Payne	Art Unit 2875	
<i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i>			
<b>Period for Reply</b>			
<b>A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.</b>			
<ul style="list-style-type: none"> <li>- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.</li> <li>- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.</li> <li>- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.</li> <li>- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).</li> <li>- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).</li> </ul>			
<b>Status</b>			
1) <input type="checkbox"/> Responsive to communication(s) filed on _____. 2a) <input type="checkbox"/> This action is FINAL.                    2b) <input checked="" type="checkbox"/> This action is non-final. 3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.			
<b>Disposition of Claims</b>			
4) <input checked="" type="checkbox"/> Claim(s) <u>1-33</u> is/are pending in the application. 4a) Of the above claim(s) <u>3,11-27 and 29-33</u> is/are withdrawn from consideration. 5) <input type="checkbox"/> Claim(s) _____ is/are allowed. 6) <input checked="" type="checkbox"/> Claim(s) <u>1,2,4-10 and 28</u> is/are rejected. 7) <input type="checkbox"/> Claim(s) _____ is/are objected to. 8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement.			
<b>Application Papers</b>			
9) <input type="checkbox"/> The specification is objected to by the Examiner. 10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).			
11) <input type="checkbox"/> The proposed drawing correction filed on _____ is: a) <input type="checkbox"/> approved b) <input type="checkbox"/> disapproved by the Examiner. If approved, corrected drawings are required in reply to this Office action.			
12) <input type="checkbox"/> The oath or declaration is objected to by the Examiner.			
<b>Priority under 35 U.S.C. §§ 119 and 120</b>			
13) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) <input type="checkbox"/> All    b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____. 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.			
14) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application). a) <input type="checkbox"/> The translation of the foreign language provisional application has been received.			
15) <input type="checkbox"/> Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.			
<b>Attachment(s)</b>			
1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> .		4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____.	

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of claims 1, 2, 4-10 and 28 in Paper No. 6 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Claim Objections***

2. Claim 1 is objected to because of the following informality: the phrase "a reflector having a first and second focal points" in line 3 should be "a first reflector having first and second focal points."

3. Claim 2 is objected to because of the following informality: the phrase "away from said reflector toward said reflector" in line 4 should be "away from said additional reflector toward said first reflector."

4. Claim 5 is objected to because of the following informality: the phrase "said reflector" in line 1 should be "said first reflector."

5. Claim 28 is objected to because of the following informality: the phrase "a output light pipe" in line 10 should be "an output light pipe."

6. Claims 4 and 6-10 are necessarily included due to their dependency.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Fjaestad et al.

(U.S. Patent 5,873,646).

Regarding claim 1, Fjaestad et al. discloses a lighting arrangement at a refrigerator or freezer cabinet. The lighting arrangement includes a filament lamp (abstract), a first reflector having first and second focal points (Figs. 3 and 4, reference number 52), the filament lamp disposed proximate to the first focal point of the reflector to emit rays of electromagnetic radiation that reflect from the reflector and converge substantially at the second focal point (Figs. 1, 3, 4 and 6), wherein a portion of the electromagnetic radiation emitted by the filament lamp impinges directly on the reflector (Figs. 1, 3, 4 and 6) and wherein the system further comprises an additional reflector (reference number 46) constructed and arranged to reflect at least part of the portion of the electromagnetic radiation that does not impinge directly on the reflector toward the reflector through the first focal point of the reflector (Figs. 1, 3, 4 and 6).

#### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fjaestad et al. in view of Strobl et al. (U.S. Patent 5,414,600).

Regarding claim 2, Fjaestad et al. does not disclose a retro-reflector. Strobl discloses a spherical retro-reflector (reference number M4) disposed on a side of the lamp opposite the reflector to reflect electromagnetic radiation emitted from the lamp in a direction away from the additional reflector and toward the first reflector through the first focal point of the first reflector (Fig. 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the spherical retro-reflector of Strobl on one side of the filament lamp of Fjaestad et al. to reflect light from the lamp back into the lamp to the reflector on the other side of the lamp.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fjaestad et al. in view of Strobl (U.S. Patent 6,356,700 B1), hereinafter "Strobl 700."

Regarding claim 4, Fjaestad et al. does not disclose a tungsten filament lamp. Strobl 700 discloses a tungsten filament lamp (column 37, lines 55-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tungsten filament lamp of Strobl 700 in the apparatus of Fjaestad to achieve a higher color temperature and operate more efficiently. See Strobl 700, column 37 in lines 65-67.

12. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fjaestad et al. in view of Dorman (U.S. Patent 4,149,227).

Regarding claim 5, Fjaestad et al. does not disclose a coating on the reflector. Dorman discloses a reflector that has a coating that reflects substantially only a pre-specified portion of the electromagnetic radiation spectrum (column 9, line 66, to column 10, line 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the coating of Dorman on the reflector of Fjaestad et al. to reflect only a specified set of wavelengths of light.

Concerning claim 6, Fjaestad et al. does not disclose a coating that reflects only a prespecified portion of light. Dorman discloses the pre-specified portion as visible radiation (column 9, line 66, to column 10, line 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a coating that reflects only the visible light as shown in Dorman in the apparatus of Fjaestad et al. to produce cool light (light free of the infrared portion of the spectrum).

13. Claims 7, 9, 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldenberg et al. (U.S. Patent 4,956,759) in view of Fjaestad et al.

Regarding claim 7, Goldenberg discloses a reflector having first and second focal points (reference number 30), a lamp (reference number 10) disposed proximate to the first focal point of the reflector to emit rays of electromagnetic radiation that reflect from the reflector and converge substantially at the second focal point (Fig. 1), wherein a portion of the electromagnetic radiation emitted by the lamp impinges directly on the reflector and a portion of the electromagnetic radiation does not impinge directly on the reflector (Fig. 1), and wherein the system further comprises an additional reflector (reference number 20) constructed and arranged to reflect at least part of the portion of the electromagnetic radiation that does not impinge directly on the reflector toward the reflector through the first focal point of the reflector (Fig. 1), and an output light pipe (reference number 40) having an input surface being located proximate to the second focal point to collect substantially all of the radiation (Fig. 1) wherein

the output surface transmits substantially all of the radiation (column 2, lines 57-60).

Goldenberg et al. does not disclose the filament lamp.

Fjaestad et al. discloses a filament lamp (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the lamp of Fjaestad et al. in the apparatus of Goldenberg to shine an image of a straight line on the reflector. (See Fjaestad et al., column 2 in lines 46-50.)

Concerning claim 9, Goldenberg et al. discloses a tapered light pipe (Figs. 1-4).

Regarding claim 10, Goldenberg et al. discloses a light pipe having a rectangular cross-section (Fig. 4).

Concerning claim 28, Goldenberg et al. discloses the steps of reflecting a portion of the rays of radiation by the reflector toward a second focal point (Fig. 1), converging the rays of radiation at the second focal point (Fig. 1), reflecting at least part of a portion of the rays of radiation that do not impinge directly on the reflector toward the reflector through the first focal point of the reflector (Fig. 1), positioning an output light pipe having an input surface and an output surface so the input surface is substantially proximate to the second focal point (Fig. 1), collecting the rays of radiation at the input surface (Fig. 1), passing the rays of radiation through the output light pipe (column 2, lines 57-61), and outputting rays of radiation from the output surface of the output light pipe (column 2, lines 57-61). Goldenberg et al. does not disclose the filament lamp.

Fjaestad et al. (U.S. Patent 5,873,646) discloses the steps of positioning a filament lamp at a first focal point of a reflector (abstract, Fig. 3), and producing rays of radiation by the filament lamp (Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the filament lamp in the process of Goldenberg to provide light.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldenberg et al. in view of Fjaestad et al. as applied to claim 7 above, and further in view of Junginger (U.S. Patent 3,772,506).

Regarding claim 8, Goldenberg et al. does not disclose a glass light pipe. Junginger discloses a glass light pipe (column 2, lines 65-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the glass light pipe of Junginger in the apparatus of Goldenberg et al. for conducting light.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharon E. Payne whose telephone number is (703) 308-2125. The examiner can normally be reached on regular business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

sep  
May 9, 2003

  
Stephen Husar  
Primary Examiner